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Sten Pahlsson

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EXAMINER

HALL, COREY JOHN

ART UNIT

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3743

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DELIVERY MODE

11/03/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/568,382	Applicant(s) PAHLSSON ET AL.	
	Examiner COREY HALL	Art Unit 3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the drain of claim 14, the encapsulation having one outer circumferential wall extending vertically along the full height of the stack, and one inner circumferential wall extending vertically along a portion of the stack, whereby said outer circumferential wall optionally has openings or perforations along the portion of the stack not covered by the inner circumferential wall of claim 16, and the encapsulation has one outer and one inner circumferential wall extending along the full height of the stack, whereby both walls have openings or perforations along a portion of the stack of claim 17 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

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renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: on page 1, line 13 “US 3,398,651” should be changed to “US 3,938,651”.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 5, 7-10, 12-13, 15, 18-19, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Crump et al. (US Patent No. 5,515,775 cited in prior notice of references cited mailed 3/4/2009).

6. Regarding claims 1-2, 5, 7-10, 12-13, 15, 18-19, and 22, Crump et al. discloses an apparatus for treatment of foodstuffs (fig. 1, “treat other particulate solid materials, e.g., food” col. 1, lines 8-10 describing the apparatus being used to process and dry materials including food) for processing and subsequent drying, comprising an endless conveyor belt (19, fig. 2, “endless conveyor belt 19” col. 5, line 46) which along part of its length follows a helical path to

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form a stack (20, fig. 2, "conveyor stack 20" col. 5, line 50), said helical path defining a central space (38, fig. 9) in the stack, the conveyor belt having passages for letting a flow of a gaseous medium in the vertical as well as horizontal direction through the stack (fig. 8 showing with arrows the conveyor belt letting a flow of gaseous medium in the vertical as well as horizontal direction through the stack, col. 6, lines 40-56 describing the conveyor belt having passages for letting a flow of gaseous medium in the vertical as well as horizontal direction through perforated inner and outer walls and a foraminous bottom member), an end portion of the stack (29, fig. 8), in which said stack is vertically surrounded by an encapsulation (fig. 8 and Figure A below) that is essentially tight in the horizontal direction, the encapsulation being formed by an outer circumferential wall (46, fig. 8 and Figure A below, col. 9, lines 9-19 describing L-shaped walls being attached to the existing partitions which would include partition 22 to create additional chambers) and an inner circumferential wall (49, fig. 8 and Figure A below showing locations on the existing partition 37 where L-shaped wall 49 can be attached, col. 9, lines 9-19 describing L-shaped walls being attached to the existing partitions which would include partition 37) vertically surrounding the end portion of the stack (29, fig. 8). Crump et al. discloses the use of walls 46 and 49 to encapsulate portions of the stack to control the flow of gas in such a way that the invention of having a portion of the stack vertically surrounded by an encapsulation that is essentially tight in the horizontal direction with an outer and inner wall is disclosed. Crump et al. further discloses a first supply (51, fig. 9) of a first gaseous medium (col. 9, lines 21-50 describing gas being fed through first supply 51 including air of specific relative humidity and steam) to said central space (38, fig. 9), and a second supply (fig. 8 showing a second supply of a second gaseous medium from means for circulating gas 34) of a second gaseous medium (col. 7,

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lines 32-39 describing a means for circulating the gas 34 and a means for conditioning the gas 35 and col. 10, lines 7-19 describing the means for circulating the gas 34 and means for conditioning the treatment gas 35 being used to thermally condition the gas to alter temperature or relative humidity) to said encapsulation (fig. 8 and Figure A below), said encapsulation being arranged to direct the flow of the second gaseous medium in such a manner that it is passed in the vertical direction (fig. 8 showing the second gaseous medium being directed in a vertical direction, col. 6, line 57-col. 7, line 9 describing walls being used to direct the flow of gas down through the stack) from said encapsulation to the rest of the stack, in which the first gaseous medium is humid water vapour (col. 9, lines 31-50 describing air of a particular strength or air of a specific relative humidity being supplied by pipe 51 to alter the humidity gradient in the stack and additionally being able to supply steam or spraying water to provide additional control over the relative humidity gradient of the gas flow, col. 10, lines 4-19 describing ways to control the humid water vapor in the apparatus and col. 10, lines 45-55 describing the apparatus providing greater control over the conditioned gas and where the language humid water vapour is not clearly defined in Applicant's Specification), in which said encapsulation (fig. 8 and Figure A below) is arranged at the upper part of the stack (29, fig. 8), in which a second end closure (37, fig. 8 and Figure A below) is arranged over the central space (38, fig. 8), in which lateral pieces (fig. 2 showing a stack having a longitudinal edge forming an outer wall of the stack 20 which is almost identical to Applicant's Figure 1 at 7b) at a longitudinal edge of the conveyor belt (19, fig. 2) form an outer wall of the stack (20, fig. 2), which defines the stack outwards in the radial direction (fig. 2), in which lateral pieces (fig. 2 showing a stack having a longitudinal edge forming an inner wall of the stack 20 which is almost identical to Applicant's Figure 1 at 7a) at a

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longitudinal edge of the conveyor belt (19, fig. 2) form an inner wall of the stack (20, fig. 2) which defines the stack inwards in the radial direction to define said central space (fig. 2 showing an inner wall of the stack defining the central space), in which a third end closure (39, fig. 8 and Figure A below) is arranged against the lowermost turn (fig. 8 and Figure A below) formed in the stack, said third end closure being arranged transversely of the central space defined by the conveyor belt (fig. 8 and Figure A below showing the third end closure 39 being transversely arranged of the central space), in which the conveying direction of the conveyor belt (19, fig. 1 showing the conveyor belt 19 entering at an inlet 17 and moving in an upward direction toward the encapsulation to an outlet 18 which is similar to Applicant's Figure 2) is arranged towards the encapsulation, in which the stack (20, fig. 1) is arranged in a housing (16, fig. 1) comprising an inlet (17, fig. 1) and an outlet (18, fig. 1) for the conveyor belt (19, fig. 1), in which the encapsulation (fig. 8 and Figure A below) has one outer (46, fig. 8 and Figure A below) and one inner (49, fig. 8 and Figure A below) circumferential wall having the same height (fig. 8 and Figure A below showing the outer and inner walls having the same height), vertically surrounding a portion of the stack (29, fig. 8), a method for treating foodstuffs (fig. 1, "treat other particulate solid materials, e.g., food" col. 1, lines 8-10 describing the apparatus being used to process and dry materials including food) for the purpose of processing and drying, comprising: (a) providing an endless conveyor belt (19, fig. 2, col. 5, line 46) which along part of its length follows a helical path to form a stack (20, fig. 2, col. 5, line 50), said conveyor belt having passages for letting a flow of a gaseous medium through the stack in the vertical as well as the horizontal directions (fig. 8, col. 6, lines 40-56 describing the conveyor belt having passages for letting a flow of gaseous medium in the vertical as well as horizontal direction),

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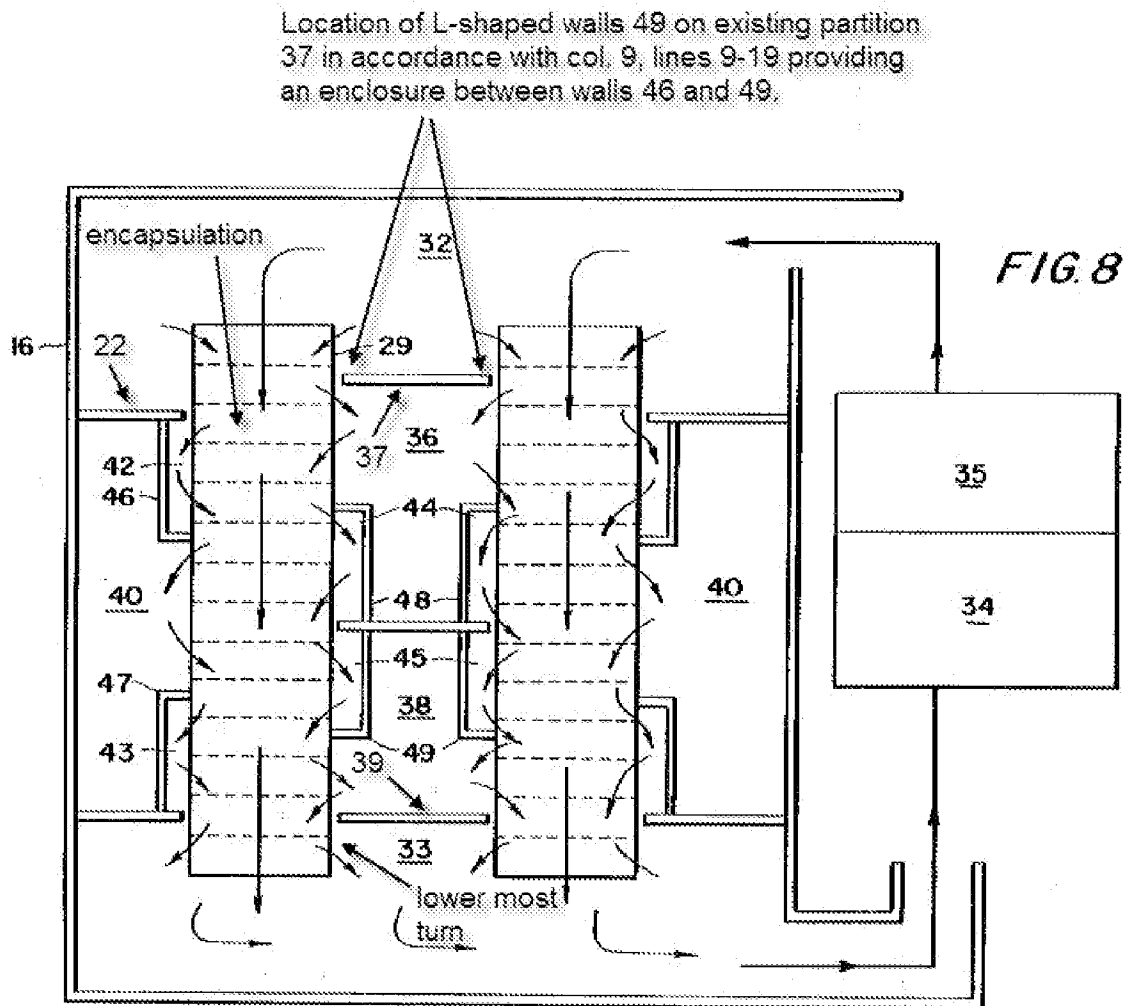
wherein: (i) the stack defining a central space (38, fig. 9), and (ii) the stack comprising a lower non-encapsulated stack portion (40, fig. 8) and, adjacent thereto, an upper stack portion (29, fig. 8) which is encapsulated in the vertical direction by an encapsulation (fig. 8 and Figure A below) that is essentially tight in the horizontal direction, the encapsulation being formed by an outer circumferential wall (46, fig. 8 and Figure A below, col. 9, lines 9-19 describing L-shaped walls being attached to the partitions which would include partition 22 to create additional chambers) and an inner circumferential wall (49, fig. 8 and Figure A below showing locations on the existing partition 37 where L-shaped wall 49 can be attached, col. 9, lines 9-19 describing L-shaped walls being attached to the existing partitions which would include partition 37) vertically surrounding the upper stack portion (29, fig. 8), (b) supplying a flow of a first gaseous medium (col. 9, lines 21-50 describing gas being fed through first supply 51 including air of specific relative humidity and steam) to said central space (38, fig. 9) for further conveyance to the non-encapsulated stack portion (40, fig. 9) through said passages for letting through a flow of a first gaseous medium in the horizontal direction, (c) supplying a flow of a second gaseous medium (fig. 8 showing a second gaseous medium from the means for circulating the gas 34, col. 7, lines 32-39 describing a means for circulating the gas 34 and means for conditioning the gas 35) to said upper encapsulated stack portion (29, fig. 8), (d) wherein said encapsulation (fig. 8 and Figure A below) directing the flow of the second gaseous medium in such a manner that it flows in an essentially vertical direction (fig. 8 showing the flow of the second gaseous medium in an essentially vertical direction) from said encapsulated stack portion (29, fig. 8) to said non-encapsulated stack portion (40, fig. 8), and (e) the flow of the second gaseous medium (fig. 8), which enters the encapsulated stack portion and flows essentially vertically downwards (fig. 8

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showing the second gaseous medium flowing essentially vertically downwards, col. 7, lines 40-41), affecting the flow of the first gaseous medium which is conveyed to the non-encapsulated stack portion (col. 9, lines 26-37 describing the first gaseous medium injected into the non-encapsulated stack portion moving downstream) so that the first gaseous medium is prevented from flowing towards the encapsulated stack portion (29, fig. 8), in which the first gaseous medium is humid water vapour (col. 9, lines 31-50 describing air of a particular strength or air of a specific relative humidity being supplied by pipe 51 to alter the humidity gradient in the stack adjacent to the chamber and additionally being able to supply steam or spraying water to provide additional control over the relative humidity gradient of the gas flow, col. 10, lines 4-19 describing ways to control the humid water vapor in the apparatus and col. 10, lines 45-55 describing the apparatus providing greater control over the conditioned gas and where the language humid water vapour is not clearly defined in Applicant's Specification), and comprising the step of arranging the conveyor belt (19, fig. 1 showing the conveyor moving in an upward direction) in a conveying direction towards the encapsulated stack portion (29, fig. 8).

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Figure A.



Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 3, 20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crump et al. (US Patent No. 5,515,775) as applied to claims 1 and 18 above, and further in view of Corcoran et al. (US Patent No. 6,572,911 B1).

11. In regards to claims 3, 20 and 23, Crump et al. discloses the claimed, except for the first gaseous medium is saturated water vapour and the source of supply of saturated water vapor comprises a fan. However, Corcoran et al. teaches a first gaseous medium of saturated water vapour ("saturated steam" col. 4, lines 1-18 describing creating a saturated steam environment for cooking foodstuffs with a desired level of moisture and "saturated steam" col. 12, lines 44-48) and the source of supply of saturated water vapor (fig. 8 showing with arrows a gaseous

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medium receiving the water vapor from nozzles 100 where the gaseous medium entering at 65 and 64 are supplied by fan 57 in fig. 6) comprises a fan (57, fig. 6, “fan 57 provides the motive means to force the heated gas to the oven sections” col. 11, lines 56-57) in order to provide a saturated steam environment that permits dough expansion to create a desired bagel product having a desired sheen, texture and geometry (col. 4, lines 1-18). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Crump et al. reference, to include the first gaseous medium is saturated water vapour and the source of supply of saturated water vapor comprises a fan, as suggested and taught by Corcoran et al., for the purpose of providing a saturated steam environment that permits dough expansion to create a desired bagel product having a desired sheen, texture and geometry. The Applicant is combining prior art elements according to known methods to yield predictable results. The Applicant is combining the prior art elements of an apparatus for processing foodstuffs on a conveyor using a first gaseous medium of water vapour as disclosed by Crump et al. with the prior art elements of an apparatus for processing foodstuffs on a conveyor using a first gaseous medium of saturated water vapour and the source of supply of saturated water vapor comprises a fan as taught by Corcoran et al. according to known methods to yield the predictable results of an apparatus for processing foodstuffs on a conveyor using a first gaseous medium of saturated water vapour and the source of supply of saturated water vapor comprises a fan. One would be motivated to combine Crump et al. with Corcoran et al. because Corcoran et al. discloses using a saturated water vapour environment when processing foodstuffs to achieve the desired sheen, texture and geometry and Crump et al. could be similarly improved by using a saturated water vapour environment when processing foodstuffs to better achieve the desired sheen, texture and

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geometry of the foodstuffs, thus providing a more valuable final product from the foodstuffs processing apparatus.

12. Claims 4, 11, 14, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crump et al. (US Patent No. 5,515,775) as applied to claims 1, 2, 13, and 18 above, and further in view of Hwang (US Patent No. 5,078,120 cited in prior notice of references cited mailed 3/4/2009).

13. In regards to claims 4, 11, 14, and 21, Crump et al. discloses the claimed invention, except for the second gaseous medium is overheated water vapour, in which the source of supply of humid water vapour comprises a fan, and in which the housing further comprises a drain for draining off condensed water vapour. However, Hwang teaches the second gaseous medium is overheated water vapour (col. 11, line 68-col. 12, line 5 describing the treating of food in a steam atmosphere with a temperature of approximately 400 degrees F), in which the source of supply of humid water vapour comprises a fan (61, fig. 5, “fans 60 and 61” col. 9, lines 15-37 describing fan 61 circulating a cooking medium of high humidity for cooking food), in which the housing further comprises a drain (52, fig. 4, “drainage channel 52” col. 8, lines 24-29 describing the drainage channel continuously draining drippings from food products which would inherently include condensed water vapor) for draining off condensed water vapour in order to provide a gaseous cooking medium that enables various cooking characteristics to be achieved within a cooking chamber (col. 3, lines 25-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Crump et al. reference, to include the second gaseous medium is overheated water vapour, in which the source of supply of humid water vapour comprises a fan, and in which the housing further comprises a drain for draining

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off condensed water vapour, as suggested and taught by Hwang, for the purpose of providing a gaseous cooking medium that enables various cooking characteristics to be achieved within a cooking chamber. The Applicant is combining prior art elements according to known methods to yield predictable results. The Applicant is combining the prior art elements of a helical stack apparatus for processing foodstuffs having a second gaseous medium of steam and humid gaseous medium as disclosed by Crump et al. with the prior art elements of a helical stack apparatus for processing foodstuffs having steam and humid gaseous medium including overheated water vapor, a fan for circulating humid water vapor and a drain for draining off condensed water vapor as taught by Hwang according to known methods to yield the predictable results of a helical stack apparatus for processing foodstuffs having steam and humid gaseous medium including overheated water vapor, a fan for circulating humid water vapor and a drain for draining off condensed water vapor. One would be motivated to combine Crump et al. with Hwang because Hwang teaches a helical stack for processing foodstuffs enabling various cooking characteristics and a drain for removing liquids during the processing foodstuffs and the helical stack for processing foodstuffs of Crump et al. could be similarly improved by using gaseous mediums that enable a greater variety of cooking characteristics and a drain, thus enabling the processing of a wider range of foodstuffs and removing condensed water vapor that may contain bacteria or odorous liquids from the processing of foodstuffs.

14. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crump et al. (US Patent No. 5,515,775) as applied to claim 1 above, and further in view of Kaufman (US Patent No. 3,443,505 cited in prior notice of references cited mailed 3/4/2009).

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15. In regards to claim 6, Crump et al. discloses the claimed invention including an encapsulation (Crump et al., fig. 8 and Figure A above), except for in which a first end closure is arranged to cover the conveyor belt at the upper edge. However, Kaufman teaches a first end closure (42, fig. 4, “conical hood 42” col. 4, lines 61-64) is arranged to cover a conveyor belt (40, fig. 4, “spiral conveyor 40” col. 4, line 62) at an upper edge (fig. 4 showing end closure 42 at an upper edge) in order to direct an air flow to an upper portion of a helical conveyor (col. 4, line 61-col. 5, line 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Crump et al. reference, to include in which a first end closure is arranged to cover the conveyor belt at the upper edge, as suggested and taught by Kaufman, for the purpose of directing an air flow to an upper portion of a spiral conveyor. The Applicant is combining prior art elements according to known methods to yield predictable results. The Applicant is combining the prior art elements of a helical conveyor for processing foodstuffs using upper and lower sections as disclosed by Crump et al. with the prior art elements of a helical conveyor for processing foodstuffs using upper and lower sections where processing gas is directed to the upper section through a first end closure arranged to cover a conveyor belt at an upper edge as taught by Kaufman according to known methods to yield the predictable results of a helical conveyor for processing foodstuffs using upper and lower sections where processing gas is directed to the upper section through a first end closure arranged to cover a conveyor belt at an upper edge. One would be motivated to combine Crump et al. with Kaufman because Kaufman teaches using a first end closure to cover a conveyor belt at an upper edge to better direct processing gas to an upper section of a helical conveyor and Crump et al. could be similarly improved to better direct processing gas to the upper section of its helical

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conveyor by using a first end closure covering the conveyer belt at an upper edge, thus more efficiently controlling the flow of processing gas to the upper section of the helical conveyor by funneling the gas flow rather than solely relying on air pressure differentials to push the gas through the helical conveyor.

16. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crump et al. (US Patent No. 5,515,775) as applied to claim 1 above, and further in view of Lang et al. (US Patent No. 4,953,365).

17. In regards to claim 16, Crump et al. discloses the claimed invention including an encapsulation (Crump et al., fig. 8 and Figure A above), except for in which the encapsulation has one outer circumferential wall extending vertically along the full height of the stack, and one inner circumferential wall extending vertically along a portion of the stack, whereby said outer circumferential wall optionally has openings or perforations along the portion of the stack not covered by the inner circumferential wall. However, Lang et al. teaches an encapsulation (fig. 16 at 203) having one outer circumferential wall (219, fig. 16 showing an outer circumferential wall extending vertically along the full height of the stack) extending vertically along the full height of the stack (203, fig. 16), and one inner circumferential wall (225, fig. 16 showing an inner circumferential wall extending vertically along a portion of the stack) extending vertically along a portion of the stack (203, fig. 16), whereby said outer circumferential wall (219, fig. 16) optionally has openings (223, fig. 16) along a portion of the stack (203, fig. 16) not covered by the inner circumferential wall (225, fig. 16) in order to provide a more vertical flow of the gas through the conveyor (col. 13, lines 1-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Crump et al. reference,

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to include in which the encapsulation has one outer circumferential wall extending vertically along the full height of the stack, and one inner circumferential wall extending vertically along a portion of the stack, whereby said outer circumferential wall optionally has openings along the portion of the stack not covered by the inner circumferential wall, as suggested and taught by Lang et al., for the purpose of providing a more vertical flow of the gas through the conveyor. The Applicant is combining prior art elements according to known methods to yield predictable results. The Applicant is combining the prior art elements of a helical conveyor for foodstuffs having an encapsulation with an outer circumferential wall extending vertically along the stack, an inner circumferential wall extending vertically along a portion of the stack and the outer circumferential wall having openings along a portion of the stack as disclosed by Crump et al. with the prior art elements of a helical conveyor for foodstuffs having an encapsulation with an outer circumferential wall extending vertically along the full height of a stack, and an inner circumferential wall extending vertically along a portion of a stack, whereby the outer circumferential wall optionally has openings along a portion of the stack not covered by the inner circumferential wall as taught by Lang et al. according to known methods to yield the predictable results of a helical conveyor for foodstuffs having an encapsulation with an outer circumferential wall extending vertically along the full height of the stack, and an inner circumferential wall extending vertically along a portion of the stack, whereby the outer circumferential wall optionally has openings along a portion of the stack not covered by the inner circumferential wall. One would be motivated to combine Crump et al. with Lang et al. because Lang et al. teaches having an outer wall of an encapsulation extend vertically along the full height of the stack and having openings along a portion of the stack not covered by the inner circumferential

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wall to achieve a more vertical flow of gas through the conveyor and Crump et al. could be similarly improved by having its outer wall extend vertically along the full height of the stack to further achieve its “preferred embodiment of this invention utilizes downward vertical flow” (Crump et al., col. 7, lines 40-41), thus providing an improved vertical airflow for processing foodstuffs on the conveyor.

18. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crump et al. (US Patent No. 5,515,775) as applied to claim 1 above, and further in view of Astrom (US Patent No. 3,412,476).

19. In regards to claim 17, Crump et al. discloses the claimed invention, except for in which the encapsulation has one outer and one inner circumferential wall extending along the full height of the stack, whereby both walls have openings or perforations along a portion of the stack. However, Astrom teaches an encapsulation (fig. 3 showing an encapsulated stack 1) has one outer (12, fig. 3) and one inner (3, fig. 3) circumferential wall extending along the full height of the stack (1, fig. 3), whereby both walls have openings (16, fig. 3, col. 2, lines 27-44 describing the outer wall 12 and inner wall 3 having openings 16 so that air can pass through as represented by the single arrows where the location of the openings is determined from case to case to gain the best effect) along a portion of the stack (1, fig. 3) in order to provide control of the flow of air through the encapsulation between the inner and outer walls so that the best effect is gained (col. 2, lines 27-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Crump et al. reference, to include in which the encapsulation has one outer and one inner circumferential wall extending along the full height of the stack, whereby both walls have openings along a portion of the stack, as

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suggested and taught by Astrom, for the purpose of providing control of the flow of air through the encapsulation between the inner and outer walls so that the best effect is gained. The Applicant is combining prior art elements according to known methods to yield predictable results. The Applicant is combining the prior art elements of a helical stack for processing foodstuffs having an encapsulation of inner and outer circumferential walls as disclosed by Crump et al. with the prior art elements of a helical stack for processing foodstuffs (Astrom, “foodstuffs” col. 1, line 13) having an encapsulation of inner and outer circumferential walls extending the full height of the stack, whereby both walls have openings along a portion of the stack as taught by Astrom according to known methods to yield the predictable results of a helical stack for processing foodstuffs having an encapsulation of inner and outer circumferential walls extending the full height of the stack, whereby both walls have openings along a portion of the stack. One would be motivated to combine Crump et al. with Astrom because Astrom teaches an encapsulation that provides greater control of the flow of air through the encapsulation by providing openings in the inner and outer walls so that the best effect is gained and Crump et al. could be similarly improved by providing openings in the inner and outer walls of its encapsulation, thus allowing for greater control over the flow of air through the encapsulation to better achieve the best effect in processing foodstuffs.

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to COREY HALL whose telephone number is (571)270-7833. The examiner can normally be reached on Monday - Friday, 9AM to 5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Rinehart can be reached on (571)272-4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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